

PUBLISHED

UNITED STATES COURT OF APPEALS

FOR THE FOURTH CIRCUIT

HUGHES RIVER WATERSHED
CONSERVANCY, an unincorporated
association; SIERRA CLUB, a
corporation; WEST VIRGINIA RIVERS
COALITION, a corporation; RUSSELL
RICHARDS; WILSON LEWIS DAVIS;
JETTIE B. STANLEY; TED RICHARDS,
Plaintiffs-Appellants,

and

WEST VIRGINIA CITIZEN ACTION
GROUP, a corporation,
Plaintiff,

v.

No. 95-3056

DANIEL R. GLICKMAN, in his official
capacity as Secretary of the United
States Department of Agriculture;
CHARLES B. FELTON, in his official
capacity as Director of the West
Virginia Division of Natural
Resources; PAUL W. JOHNSON, in his
official capacity as Chief
Administrator of the Soil
Conservation Service, United States
Department of Agriculture;
ARTHUR E. WILLIAMS, Lieutenant
General, in his official capacity as
Chief of Engineers, United States
Army Corps of Engineers;

ROBERT L. BENSEY, in his official capacity as State Conservationist, Natural Resources Conservation Service, United States Department of Agriculture; FRED FIELDS, in his official capacity as Chairman of the Board of Supervisors of the Little Kanawha Soil Conservation District, a political subdivision of the State of West Virginia,
Defendants-Appellees.

and

MIKE ESPY, in his official capacity as Secretary of the United States Department of Agriculture; ROLLIN SWANK, in his official capacity as State Conservationist, Soil Conservation Service, United States Department of Agriculture; JOHN SIMS, in his official capacity as Chairman of the Board of Supervisors of the Little Kanawha Soil Conservation District, a political subdivision of the State of West Virginia; JAMES B. LAWRENCE, in his official capacity as Commissioner of the West Virginia Division of Tourism and Parks; JESSE L. WHITE, Doctor, in his official capacity as Co-Chairman of the Appalachian Regional Commission,
Defendants.

AMERICAN RIVERS, INCORPORATED,
Amicus Curiae.

Appeal from the United States District Court
for the Northern District of West Virginia, at Clarksburg.
William M. Kidd, Senior District Judge.
(CA-94-113-1)

Argued: February 2, 1996

Decided: April 12, 1996

Before HALL and HAMILTON, Circuit Judges, and PHILLIPS,
Senior Circuit Judge.

Affirmed in part, vacated in part, and remanded for further proceedings by published opinion. Judge Hamilton wrote the majority opinion, in which Senior Judge Phillips joined. Judge Hall wrote a dissenting opinion.

COUNSEL

ARGUED: Robert Geoffrey Dreher, SIERRA CLUB LEGAL DEFENSE FUND, Washington, D.C., for Appellants. Robert Lawrence Klarquist, UNITED STATES DEPARTMENT OF JUSTICE, Washington, D.C.; Christopher Burr Power, ROBINSON & MCELWEE, Charleston, West Virginia, for Appellees. **ON BRIEF:** Thomas R. Michael, MICHAEL & KUPEC, Clarksburg, West Virginia, for Appellants. Lois J. Schiffer, Assistant Attorney General, J. Carol Williams, UNITED STATES DEPARTMENT OF JUSTICE, Washington, D.C.; William D. Wilmoth, United States Attorney, Patrick M. Flatley, Assistant United States Attorney, Wheeling, West Virginia; Jeffrey D. Eisenberg, UNITED STATES DEPARTMENT OF AGRICULTURE, Washington, D.C.; Terry Clark, Assistant District Counsel, UNITED STATES ARMY CORPS OF ENGINEERS, Huntington, West Virginia, for Federal Appellees. David L. Yaussy, ROBINSON & MCELWEE, Charleston, West Virginia, for Appellees Fields and Little Kanawha District; Darrell V. McGraw, Jr., Attorney General, Rex Burford, Senior Assistant Attorney General, Charleston, West Virginia, for State Appellees.

OPINION

HAMILTON, Circuit Judge:

The Hughes River Watershed Conservancy, the Sierra Club, the West Virginia Rivers Coalition, and four private individuals (collectively referred to as "the Conservancy") brought this action against federal and West Virginia officials (collectively referred to as "the Agencies") seeking judicial review of the decisions of the Natural Resources Conservation Service (the NRCS) and the United States Army Corps of Engineers (the Corps) approving construction of a dam on the North Fork of the Hughes River in northwestern West Virginia. The Conservancy alleged, among other things, that the NRCS and the Corps violated the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-70d, and the Wild and Scenic Rivers Act (WSRA), 16 U.S.C. §§ 1271-87. The district court granted summary judgment in favor of the Agencies and the Conservancy appealed. We affirm in part, vacate in part, and remand for further proceedings.

I.

The North Fork of the Hughes River (the North Fork) is a free-flowing river located in a rugged and mountainous area of northwestern West Virginia. In addition to its extraordinary scenic value, the North Fork is the habitat of an extensive variety of fish and wildlife. It supports a population of twenty-two freshwater mussel species, including two species under consideration for listing as threatened or endangered under the Endangered Species Act. See 16 U.S.C. § 1533. It also contains wetland areas, riffle and pool complexes, and vegetated shallows that provide habitats for various species. The North Fork is listed on the National Park Service's Nationwide Rivers Inventory as a possible addition to the National Wild and Scenic Rivers System.

For more than twenty years, the Little Kanawha Soil Conservation District and several municipalities in the North Fork area (the Local Sponsors) have considered building a multipurpose dam on the North Fork to curb periodic flooding, improve water supply, increase recreational opportunities, and stimulate the area's economy. The proposed

dam eventually came to be known as the "North Fork Hughes River Watershed Project" (the Project).

In 1971, the Local Sponsors applied to the NRCS ¹ for assistance in building the Project. The NRCS responded in 1975 with a proposal for construction of the Project. This proposal remained dormant for years because the Local Sponsors could not raise their share of the funds needed to construct the Project.

Local interest in the Project was renewed in 1988, following a drought. The Local Sponsors again sought assistance from the NRCS. The NRCS accordingly began reexamining the feasibility of the Project. In the meantime, the Appalachian Regional Commission (the ARC) became interested in the Project. The ARC, a federal agency established to assist in the economic development of the Appalachian region, subsequently elected to pursue the Project as a special rural economic stimulus project. Through the ARC, the cost of the Project would be paid entirely with federal funds.

The NRCS entered into an agreement with the ARC requiring the NRCS to assist in the planning, design, and construction of the Project. The NRCS determined that in order to comply with NEPA, an environmental impact statement (EIS) should be prepared before going forward with the Project. After conducting a series of public meetings, the NRCS released and circulated for comment a draft EIS for the Project. The draft EIS proposed that a multipurpose dam creating a 305-acre lake be built on the North Fork.

In response to a request for public comment on the draft EIS, the Sierra Club, the Department of the Interior, and the Environmental Protection Agency (the EPA) informed the NRCS that they considered the draft EIS to be deficient for several reasons. They pointed out that the EIS did not adequately analyze the adverse environmental effects of the Project, did not adequately consider methods of mitigating those effects, and did not adequately explore possible alternatives to the Project. Additionally, the Department of the Interior and the

¹ The NRCS was then named the Soil Conservation Service. For simplicity, we refer to both the Soil Conservation Service and the Natural Resources Conservation Service as "NRCS."

EPA expressed concern that the Project would eliminate the North Fork's potential for being designated as part of the National Wild and Scenic Rivers System. And the Sierra Club questioned the reliability of the NRCS's estimate of the Project's economic benefits.

In June 1994, the NRCS released a final EIS, which contained the NRCS's responses to the comments it received regarding the draft EIS. And in July 1994, the NRCS issued a record of decision (NRCS's ROD) approving the Project.

Meanwhile, one of the Local Sponsors, the Little Kanawha Soil Conservation District, applied to the Corps local district office (the District Office) for a permit under § 404 of the Clean Water Act for the Project.² The District Office then issued a public notice soliciting comments on the application. The public notice explained that the comments would be used to assist the Corps in complying with its obligations under NEPA.

Both the EPA and the Department of the Interior's Fish and Wildlife Service (the FWS) responded to the public notice by recommending that the § 404 permit be denied because the Project would result in substantial and unacceptable damage to the North Fork. When the EPA received the public notice, it was in the process of reviewing the NRCS's final EIS for the Project. The EPA informed the Corps that the final EIS was inadequate and that the Corps should therefore prepare a supplemental EIS before going forward with the Project. Both the EPA and the FWS objected to the final EIS's inadequate analysis of alternatives to the Project and to the elimination of the North Fork's potential to be included in the National Wild and Scenic Rivers System as a result of the Project. The EPA also warned the Corps that the Project would probably cause infestation of the North Fork by zebra mussels, a nonindigenous mollusk that destroys native mussel populations.

Without resolving all the issues raised by the EPA and the FWS, the District Office notified the EPA and the FWS that it intended to issue a § 404 permit for the Project. The Conservancy then filed this

² This permit was necessary because the Project involved discharging fill material into the North Fork. See 33 U.S.C. § 1344(a).

action seeking judicial review of the NRCS's and the Corps's approval of the Project and requesting temporary relief to prevent construction of the Project.

Thereafter, the EPA and the FWS each requested that the Assistant Secretary of the Army for Civil Works (the Assistant Secretary) review the District Office's decision to issue the § 404 permit.³ Both the EPA and the FWS cited inadequate analysis of alternatives, zebra mussel infestation, and National Wild and Scenic River System designation as concerns. Because the elevation requests suspended issuance of the § 404 permit, the hearing on the Conservancy's motion for temporary relief was continued.

The Assistant Secretary responded to the elevation requests by directing the District Office to undertake a comprehensive reevaluation of alternatives to the Project. During the reevaluation process, the Conservancy wrote to the District Office, requesting that a supplemental EIS be prepared to address zebra mussel infestation and to evaluate the potential of the North Fork to be included in the National Wild and Scenic Rivers System. After consulting with the EPA and the FWS, the District Office prepared a Memorandum for Record that rejected all the alternatives to the Project. The EPA and the FWS responded to the Memorandum for Record, registering their continued dissatisfaction with the analysis performed by the District Office.⁴ Nevertheless, the Corps's headquarters concurred with the District Office's Memorandum for Record and directed the District Office to issue a § 404 permit for the Project.

³ Memoranda of Agreement between the Corps and the EPA and between the Corps and the Department of the Interior allow the EPA and the FWS to "elevate" the decision of a district office to issue a § 404 permit by having the Assistant Secretary review the district office's decision. The elevation of permit decisions is limited "to those cases where the net loss . . . from the project . . . will result in unacceptable adverse effects to aquatic resources of national importance." (J.A. 567, 577).

⁴ The EPA has the authority to veto a decision by the Corps to issue a § 404 permit if the EPA determines that issuance of the § 404 permit "will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas . . . , wildlife, or recreational areas." 33 U.S.C. § 1344(c). The EPA rarely exercises this authority and did not exercise it in this case.

On June 2, 1995, the District Office issued the § 404 permit. Accompanying the § 404 permit was a record of decision (Corps's ROD), which included an environmental assessment prepared by the District Office.⁵ The Corps's ROD noted that the NRCS had already prepared an EIS for the Project and concluded, "There has been no new evidence or information that would require that the [EIS] be supplemented." (J.A. 558).

Thereafter, the Conservancy filed an amended complaint, challenging the decisions of the NRCS and the Corps in approving the Project. The parties agreed to stay construction on the Project pending a decision by the district court. The case was submitted to the district court on cross-motions for summary judgment based on the administrative records of the NRCS and the Corps. After hearing oral argument on the motions, the district court granted summary judgment in favor of the Agencies on October 30, 1995 and continued the stay until December 1, 1995. This appeal followed. On December 13, 1995, we denied the Conservancy's motion for a stay pending appeal and granted the Conservancy's motion to expedite the appeal.

The Conservancy raises three issues on appeal. First, it argues that the NRCS and the Corps failed to take a "hard look" at the problem of zebra mussel infestation resulting from the Project before deciding not to prepare a supplemental EIS. Second, it argues that the reliance by the NRCS and the Corps on an inflated estimate of the Project's economic benefits impaired fair consideration of the Project's adverse environmental effects. Third, it argues that the NRCS and the Corps failed to comply with the WSRA. We shall address each of these issues in turn.

II.

The Conservancy first argues that the NRCS and the Corps violated NEPA by failing to take a "hard look" at the problem of zebra mussel infestation resulting from the Project before deciding not to prepare

⁵ An environmental assessment is a public document that federal agencies prepare for the purpose of analyzing whether to prepare an environmental impact statement for a proposed project. 40 C.F.R. § 1508.9(a)(1).

a supplemental EIS. To evaluate this argument, we begin by reviewing the duties that NEPA imposes on federal agencies.

A.

NEPA declares a national policy of protecting and promoting environmental quality. See 42 U.S.C. §§ 4321, 4331(a); Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 348 (1989). To implement this policy, NEPA requires federal agencies to follow certain procedures before undertaking projects that will affect the environment. Thus, although NEPA establishes environmental quality as a substantive goal, it is well settled that NEPA does not mandate that agencies reach particular substantive results. Instead, it simply sets forth procedures that agencies must follow. Robertson, 490 U.S. at 350; Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 558 (1978). In other words, "[i]f the adverse environmental effects of . . . proposed action[s] are adequately identified and evaluated, [agencies are] not constrained by NEPA from deciding that other values outweigh the environmental costs." Robertson, 490 U.S. at 350.

Central to NEPA's procedural focus is the requirement that federal agencies prepare EISs to be included "in every recommendation or report on proposals for . . . major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). Preparation of an EIS serves the national policy of protecting and promoting environmental quality in two ways. First, it ensures that an agency, when deciding whether to approve a project, will carefully consider, or take a "hard look" at, the project's environmental effects. Robertson, 490 U.S. at 349. Second, it ensures that relevant information about a proposed project will be made available to members of the public so that they may play a role in both the decisionmaking process and the implementation of the decision. Id.

But the preparation of an EIS does not complete an agency's NEPA duties. NEPA requires agencies to take a hard look at the environmental consequences of their proposed projects even after an EIS has been prepared. Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 374 (1989). An agency must prepare a supplemental EIS when "[t]here are significant new circumstances or information rele-

vant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. § 1502.9(c)(1)(ii). "[T]he new circumstance must present a seriously different picture of the environmental impact of the proposed project from what was previously envisioned." Hickory Neighborhood Defense League v. Skinner, 893 F.2d 58, 63 (4th Cir. 1990) (quoting Sierra Club v. Froehlke, 816 F.2d 205, 210 (5th Cir. 1987)).

In reviewing an agency's decision not to prepare a supplemental EIS, a court must undertake a two-step inquiry. First, the court must determine whether the agency took a hard look at the proffered new information. Second, if the agency did take a hard look, the court must determine whether the agency's decision not to prepare a supplemental EIS was arbitrary or capricious. See Village of Grand View v. Skinner, 947 F.2d 651, 657 (2d Cir. 1991); see also Marsh, 490 U.S. at 385. We undertake this inquiry without giving deference to the district court's resolution of the issue. See Sabine River Auth. v. United States Dep't of Interior, 951 F.2d 669, 679 (5th Cir.), cert. denied, 506 U.S. 823 (1992); Roanoke River Basin Ass'n v. Hudson, 940 F.2d 58, 61 (4th Cir. 1991), cert. denied, 502 U.S. 1092 (1992). With these principles in mind, we now review the decisions of the NRCS and the Corps not to prepare a supplemental EIS.

B.

Although several entities commented on the NRCS's draft and final EISs, none of those entities raised concerns regarding zebra mussel infestation before the NRCS issued its final EIS. But when the Corps solicited comments on the § 404 permit application, the EPA warned that zebra mussels would infest the North Fork if the Project were completed. The EPA explained to a District Office biologist that zebra mussel infestation would have three adverse effects. First, the zebra mussels would destroy indigenous mussels that dwell downstream from the dam. Second, the zebra mussels would clog intake structures located downstream from the dam. Third, the zebra mussels would have negative effects on the North Fork's ecosystem as a whole.

The District Office biologist then discussed zebra mussel infestation in the district with an employee of the Corps's water quality sec-

tion. The employee stated that although the Ohio River was infested, none of the district's reservoirs were.

Subsequently, the District Office issued a draft § 404 permit for the Project. The Statement of Findings accompanying the draft § 404 permit dismissed the EPA's zebra mussel concerns, apparently based on the biologist's single conversation with the water quality section employee. The Statement of Findings asserted:

The Corps Engineering Division Water Quality Section has sampled for zebra mussels in the reservoirs and the rivers of Huntington District for many years. The Ohio River has been found to be infested. According to the Water Quality Section, no Corps reservoir is infested with zebra mussels, but they expect that all reservoirs will become infested.

. . . The position of the Corps is that the impacts to the warmwater fish and 22 species of mussels [located downstream of the proposed dam] will be compensated adequately by conditions in the states [sic] certification and in any permit issued. Based on information available to this office, it appears that zebra mussel infestation of all waters may occur. Denying a permit for an impoundment because an infestation of zebra mussels may occur does not appear reasonable.

(J.A. 361-62).

Upon issuance of the draft § 404 permit, the Corps received additional indications of the significance of zebra mussel infestation. The EPA and the FWS forwarded to the Corps the views of Dr. Richard Neves, a professor of fisheries at Virginia Polytechnic Institute and State University. According to Dr. Neves, if the Project went forward, zebra mussel infestation would have a "devastating" effect on the North Fork downstream from the dam. (J.A. 402). Dr. Neves stated that available studies regarding zebra mussel infestation show that zebra mussel infestation results from boating on rivers and from releases of zebra mussel larvae into rivers from infested reservoirs. Although Dr. Neves agreed with the Corps that all the district's reservoirs would eventually become infested, he disputed the Corps's con-

clusion that infestation of the reservoirs would inevitably lead to infestation of rivers such as the North Fork that currently do not have reservoirs or frequent boating. He concluded that if a dam is built on the North Fork, the reservoir created by the dam will become infested with zebra mussels, which will then infest the entire downstream reach of the North Fork. On the other hand, the North Fork "would not become heavily infested as a free-flowing river without frequent navigational traffic." (J.A. 403).

Dr. Neves discussed zebra mussel infestation with five other experts. Based on these discussions, he concluded that "there is general concurrence" that dams provide the crucial sites for zebra mussel infestations downstream. (J.A. 407). Dr. Neves provided the names and telephone numbers of the experts to whom he spoke and urged that the Corps contact them to verify his conclusions.

The Corps did not contact these experts. Instead, the District Office biologist again called an employee of the Corps's water quality section to request his opinion regarding zebra mussel infestation. According to a memorandum summarizing the conversation, the employee stated that "in his and WQ's opinion all waters will be infested. If there is fishing now then possible infestation from fish bait buckets [sic]." (J.A. 409).

The Corps's ROD accompanying its final decision to issue the § 404 permit restates, almost verbatim, the conclusion from the Statement of Findings accompanying the draft § 404 permit:

The position of [the Corps] was that the impacts to the warmwater fish and 22 species of mussels will be compensated adequately by conditions in the states [sic] certification and in any permit issued. Based on information available to this office, it appears that zebra mussel infestation of all waters may occur. Denying a permit for an impoundment because an infestation of zebra mussels may occur does not appear reasonable.

(J.A. 543). The Corps's ROD summarily concludes, "There has been no new evidence or information that would require that the Environmental Impact Statement be supplemented. . . . [A] permit for the

[Project] will be issued and . . . the NEPA obligations have been met." (J.A. 558).⁶

C.

We conclude that the Corps did not take a hard look at the problem of zebra mussel infestation resulting from the Project. The EPA, the FWS, and Dr. Neves informed the Corps that zebra mussel infestation of the North Fork would have "devastating" environmental consequences. The Corps was also presented with evidence from Dr. Neves and five other experts showing that the North Fork would not become heavily infested without the Project. In response to this information, a District Office biologist simply made two telephone calls to the Corps's water quality section and elicited the opinions from two individuals that all the district's reservoirs would eventually become infested and that the North Fork could possibly become infested from fish bait buckets. These two telephone calls do not constitute the hard look required by NEPA. Cf. Marsh, 390 U.S. at 378-85 (concluding that the Corps took a hard look at new information when it obtained expert opinion within the agency and consulted two outside experts, gave careful scientific scrutiny to the new information, and explained why the new information did not require the preparation of a supplemental EIS).

The Corps argues that it was entitled to rely on the opinions of its water quality section employees. The Supreme Court has stated that "[w]hen specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive." Id. at 378. Here, however, the record provides no basis for determining whether the opinions of the water quality section employees were reasonable or whether the employees were

⁶ A federal agency may adopt an EIS prepared by another federal agency as long as the statement is adequate. 40 C.F.R. § 1506.3(a). Corps regulations implementing NEPA generally allow Corps district offices to adopt another federal agency's EIS unless the district office "finds substantial doubt as to technical or procedural adequacy or omission of factors important to the Corps decision." 33 C.F.R. § 230.21. If the district office has doubt about the EIS it must prepare a supplemental EIS.

qualified to render opinions about zebra mussel infestation. The only glimmer of reasoning behind the Corps's conclusion that the North Fork would become infested regardless of the Project is the notation, "If there is fishing now then possible infestation from fish bait buckets [sic]." (J.A. 409). And the only information regarding the qualifications of the person who supplied this reasoning is that he was an employee of the Corps's water quality section.

Furthermore, the Corps's reliance on the opinions of its water quality section employees was misplaced because the opinions do not address the expert evidence furnished to the Corps. In particular, they do not address Dr. Neves' undisputed conclusion that heavy infestation of the river would not occur without the reservoir. See Marsh, 490 U.S. at 378 (holding that when determining whether an agency decision not to prepare a supplemental EIS was arbitrary or capricious, courts must consider whether the decision was based on a consideration of the relevant factors); cf. 40 C.F.R. § 1503.4 (requiring agencies, when preparing an EIS, to respond to comments by explaining in the EIS why the comments do not warrant further agency response and by citing the authorities or reasons that support the agency's position).

In summary, we hold that the Corps violated NEPA by failing to take a "hard look" at the problem of zebra mussel infestation resulting from the Project. On remand, the district court shall direct the Corps to take a hard look at the problem of zebra mussel infestation and to determine, based on that hard look, whether to prepare a supplemental EIS addressing zebra mussel infestation.⁷

⁷ Because of the somewhat unusual facts of this case, we do not hold that the NRCS violated NEPA by failing to take a hard look at the problem of zebra mussel infestation. Although Marsh makes clear that the NRCS had a continuing duty to consider the environmental consequences of the Project even after it completed its EIS (see 490 U.S. at 371-72), the problem of zebra mussel infestation was never directly brought to the NRCS's attention, except by the filing of this action. See Roanoke River, 940 F.2d at 64 (holding in a NEPA case that an agency's "failure to consider an effect that was not brought to its attention cannot be faulted") (citing Vermont Yankee, 435 U.S. at 558).

III.

The Conservancy next argues that the NRCS and the Corps violated NEPA by relying on an inflated estimate of the Project's economic benefits. The Conservancy asserts that reliance on this inflated estimate of the Project's economic benefits impaired fair consideration of the Project's adverse environmental effects.

A.

As we have already noted, an EIS serves two functions. First, it ensures that agencies take a hard look at the environmental effects of proposed projects. Second, it ensures that relevant information regarding proposed projects is available to members of the public so that they may play a role in the decisionmaking process. Robertson, 490 U.S. at 349. For an EIS to serve these functions, it is essential that the EIS not be based on misleading economic assumptions.

Misleading economic assumptions can defeat the first function of an EIS by impairing the agency's consideration of the adverse environmental effects of a proposed project. See South La. Envtl. Council, Inc. v. Sand, 629 F.2d 1005, 1011-12 (5th Cir. 1980). NEPA requires agencies to balance a project's economic benefits against its adverse environmental effects. Calvert Cliffs' Coordinating Comm. v. United States Atomic Energy Comm'n, 449 F.2d 1109, 1113 (D.C. Cir. 1971). The use of inflated economic benefits in this balancing process may result in approval of a project that otherwise would not have been approved because of its adverse environmental effects. Similarly, misleading economic assumptions can also defeat the second function of an EIS by skewing the public's evaluation of a project.

Because of the potential for misleading economic assumptions to defeat the functions of an EIS, we will engage in a "narrowly focused" review of the economic assumptions underlying a project to determine whether the economic assumptions "were so distorted as to impair fair consideration" of the project's adverse environmental effects. Sand, 629 F.2d at 1011.

B.

Before the NRCS prepared its EIS, it decided to estimate the economic benefits that would result from recreational use of the Project.

An NRCS national recreation specialist and an NRCS agricultural economist visited the Project site to provide guidance in evaluating the Project's recreation benefits. They emphasized the importance of calculating net, rather than gross, recreation benefits that would result from the Project. To this end, they specifically recommended that the value of the Project's recreation benefits be determined by estimating future recreational use of the area both with and without the Project, the recreational use that would simply be transferred to the Project from existing recreational facilities, and current recreational use of the North Fork that may be diminished by the Project. Application of these standards would prevent the estimate of the Project's recreation benefits from being inflated.

Thereafter, the NRCS commissioned a study (the WVU Study) by two West Virginia University professors to quantify the recreation benefits that would result from the Project. The contract between the NRCS and West Virginia University expressly required that the WVU Study calculate net, rather than gross, recreation benefits. But in disregard of this requirement, the WVU Study actually calculated gross, rather than net, recreation benefits. The WVU Study's inflated estimate of recreation benefits was then incorporated into the EIS.

The EIS states that the Project's total average annual economic benefits will be \$6,913,700 and that the Project's total average annual economic costs will be \$3,403,900. Of the \$6,913,700 in economic benefits, \$2,188,900 constituted recreation benefits derived from the WVU Study.⁸ Thus, approximately thirty-two percent of the economic benefits were attributable to recreation benefits.

Although the Agencies have conceded on appeal that the WVU Study calculated gross, rather than net, recreation benefits, they contend that reliance on the WVU Study's inflated estimate of recreation benefits did not impair fair consideration of the Project's adverse environmental effects. To support this argument, they point to general

⁸ The WVU Study, which was completed in December 1991, determined that the recreation benefits from the Project would be \$1,903,421. When the NRCS released its EIS in 1994, it stated the recreation benefits to be \$2,188,900, rather than \$1,903,421, to reflect the value of the recreation benefits in 1994 dollars.

statements in the WVU Study indicating that the cost of displacing existing uses of the North Fork will be relatively minimal and indicating that demand exists for the recreational opportunities that the Project will provide. But the Agencies do not argue, nor could they, that these general statements validate the \$2,188,900 figure included in the EIS.

C.

We conclude that the EIS's use of the \$2,188,900 figure impaired the first function of the EIS--ensuring that the NRCS and the Corps take a hard look at the Project's adverse environmental effects. Both the NRCS and the Corps balanced the Project's economic benefits against its environmental effects, as they were required to do under NEPA. See Calvert Cliffs' Coordinating Committee, 449 F.2d at 1113. On the economic side of the scale, the EIS used by both the NRCS and the Corps included an inflated estimate of recreation benefits that accounted for a significant portion, approximately thirty-two percent, of the economic benefits.

Moreover, it is clear that the NRCS and the Corps viewed the inflated estimate of recreation benefits derived from the WVU Study as crucial in their evaluations of the Project. The EIS prepared by the NRCS stresses that a multipurpose dam would be economically feasible only because it could be used for flood control, water supply, and recreation. The EIS concludes that the optimum size of the reservoir created by the multipurpose dam "was found to be 305 acres and was based on projected recreation uses." (J.A. 104). Furthermore, the environmental analysis included in the Corps's ROD relies on the NRCS's EIS and incorporates the value of recreation benefits derived from the WVU Study. The Corps's ROD cites the WVU Study and concludes, "The monetary benefits of flat-water recreation will provide a positive BCR [benefit/cost ratio] and economic stimulus to the watershed." (J.A. 534).⁹

⁹ Funding for the Project was contingent on its having a positive benefit/cost ratio. In the EIS, the NRCS calculates the benefit/cost ratio to be 2:1. The EIS includes regional economic benefits in calculating this benefit/cost ratio. The Corps's ROD, however, excludes regional eco-

We also conclude that the EIS's use of the \$2,188,900 figure impaired the second function of the EIS--ensuring that members of the public have accurate information to enable them to evaluate the Project. The WVU Study clearly purports to forecast net recreation benefits resulting from the Project. Its introductory paragraph states, "The purpose of this study is to estimate the net recreational benefits generated by the construction of flood-control impoundments on the North Fork of the Hughes River." (J.A. 193). The EIS incorporates the WVU Study's calculation of the recreation benefits from the Project without acknowledging that the WVU Study estimated gross, rather than net, recreation benefits resulting from the Project. Therefore, the EIS had the potential to mislead the public about the economic benefits that would result from the Project. See Johnston v. Davis, 698 F.2d 1088, 1095 (10th Cir. 1983) (requiring the NRCS to revise an EIS because the EIS suggested without qualification that a project would produce net economic benefits, without mentioning that an unreasonably low discount rate was used in calculating the benefits).

In summary, we hold that the reliance by the NRCS and the Corps on the WVU Study's inflated estimate of the Project's recreation benefits violated NEPA because it impaired fair consideration of the Project's adverse environmental effects.¹⁰

conomic benefits. As a result, the Corps calculated the Project's total average annual economic benefits to be only \$3,850,900, and the Project's total average annual economic costs to be \$3,403,900, yielding a positive benefit/cost ratio of only 1.1:1. Of the \$3,850,900 in economic benefits, \$2,188,900 constituted recreation benefits derived from the WVU Study. Thus, under the Corps's analysis, approximately fifty-seven percent of the economic benefits were attributable to recreation benefits.

¹⁰ The Conservancy also argues that the Corps arbitrarily omitted regional economic benefits in evaluating the economic benefits and costs of the Project and alternatives to the Project. The Corps determined that none of the alternatives to the Project standing alone would satisfy the Project's purposes. But several of the alternatives would satisfy the Project's purposes when combined with other alternatives. These combinations of alternatives were all rejected, however, because they had negative benefit/cost ratios.

IV.

The Conservancy next argues that the district court erred in concluding that the WSRA imposed no duties on the NRCS and the Corps. This argument centers on matters of statutory interpretation, which we review *de novo*. United States v. Jefferson-Pilot Life Ins. Co., 49 F.3d 1020, 1021 (4th Cir. 1995). We begin by examining the statutory scheme of the WSRA.

A.

The WSRA declares a national policy of preserving in free-flowing condition rivers with "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values." 16 U.S.C. § 1271. The WSRA implements this policy by instituting a National Wild and Scenic Rivers System (the System). 16 U.S.C. § 1272. The WSRA designates the initial rivers composing the System and prescribes methods and standards by which additional rivers may be added to the System. 16 U.S.C. §§ 1272-74.

Under WSRA § 7, certain protections apply to rivers in the System. For example, the Federal Energy Regulatory Commission cannot license the construction of dams on or directly affecting a designated river, and no federal agency can assist in the construction of any water resources project that would have a direct and adverse effect on the river. See 16 U.S.C. § 1278(a). These protections do not preclude development below or above a wild, scenic, or recreational river area,

The Conservancy argues that the combinations of alternatives rejected by the Corps because of their negative benefit/cost ratios would generate some regional economic benefits. The Conservancy asserts that the Corps excluded these regional economic benefits from the benefit/cost ratios of the Project and its alternatives so it could eliminate all the alternatives from consideration based on negative benefit/cost ratios. But as the Conservancy acknowledges, it is not customary to include regional economic benefits in a project of this type. We therefore conclude that the Corps did not arbitrarily omit the regional benefits from its benefit/cost analysis.

as long as the development will not diminish the river area's wild, scenic, or recreational values. Id.

WSRA § 5(a) sets out a list of rivers that Congress has designated for "potential addition" to the System. 16 U.S.C. § 1276(a). The Secretary of the Interior must conduct studies to determine whether these rivers should be added to the System. See 16 U.S.C. §§ 1275(a), 1276(b). The same protections that apply under WSRA § 7(a), 16 U.S.C. § 1278(a), to rivers in the System also apply to potential additions to the System designated in WSRA § 5(a), but the protections only apply for a limited period following designation of a river as a potential addition to the System. See 16 U.S.C. § 1278(b).

B.

The North Fork is not part of the System and is not listed as a potential addition to the System in WSRA § 5(a), 16 U.S.C. § 1276(a). Thus, none of the protections described above apply to the North Fork. But the Conservancy argues that the North Fork is entitled to certain protections under WSRA § 5(d), 16 U.S.C. § 1276(d), which provides:

(1) In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials. The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic and recreational river areas within the United States shall be evaluated in planning reports by all Federal agencies as potential alternative uses of the water and related land resources involved.

(2) The Congress finds that the Secretary of the Interior, in preparing the Nationwide Rivers Inventory as a specific study for possible additions to the . . . System, identified the Upper Klamath River The Secretary, acting through the Bureau of Land Management, is authorized under this sub-

section to complete a study of the eligibility and suitability of such [river] for potential addition to the . . . System. . . . Nothing in this paragraph shall affect the authority or responsibilities of any other Federal agency with respect to activities or actions on this segment and its immediate environment.

The Conservancy interprets WSRA § 5(d)(1) to mean that when a federal agency plans a water development project on any river, the federal agency must consider whether the river involved has the potential for inclusion in the System and must discuss that potential in its project plan report. Additionally, if the Secretary of the Interior or the Secretary of Agriculture has identified the river as a potential candidate for inclusion in the System, the federal agency must evaluate the benefits of designating the river as part of the System as an alternative to the proposed project.

Applying its interpretation to this case, the Conservancy argues that WSRA § 5(d)(1) requires the NRCS and the Corps to consider the North Fork's potential as a wild and scenic river and to discuss this potential in the EIS or in a separate document. Moreover, because an eight-mile segment of the North Fork is listed on the Nationwide Rivers Inventory (NRI), the Conservancy contends that the NRCS and the Corps must evaluate the benefits of designating the North Fork as part of the System as an alternative to building the Project.

The district court rejected the Conservancy's argument, holding that WSRA § 5(d)(1) applies only to the rivers designated for potential addition to the System in WSRA § 5(a) and that no duties were imposed on the NRCS and the Corps by the North Fork's listing on the NRI. The district court alternatively held that even if WSRA § 5(d)(1) or the NRI did impose duties on the NRCS and the Corps, they complied with those duties.

Assuming arguendo that the first sentence of WSRA § 5(d)(1) required the NRCS and the Corps to consider and discuss the North Fork's potential to be included in the System, we agree with the district court that the NRCS and the Corps complied with that duty. The EIS, which both the NRCS and the Corps relied on, "consider[s] and discuss[es]" the potential of the North Fork for inclusion in the Sys-

tem. See 16 U.S.C. § 1276(d)(1). Specifically, the EIS discusses the North Fork's listing on the NRI and acknowledges that rivers listed on the NRI have the potential to be included in the System. The EIS also discloses that the NRCS consulted with the National Park Service regarding the North Fork's potential to be included in the System. Moreover, the EIS acknowledges that the North Fork's potential for inclusion in the System will remain high if the Project is not built. The EIS explains that the Project will inundate 3.4 miles of the North Fork, and that such inundation will eliminate the potential of that 3.4 miles to be included in the System. The Corps's ROD similarly considers and discusses the North Fork's listing on the NRI and its potential to be included in the System. We thus conclude that, in this case, the NRCS and the Corps considered and discussed the potential of the North Fork to be included in the System. Therefore, we need not decide whether the first sentence of WSRA § 5(d)(1) imposes a mandatory duty on all federal agencies to consider and discuss the potential to be included in the System of every river on which a project is proposed.

However, our inquiry does not end with the first sentence of WSRA § 5(d)(1), for the Conservancy argues that the second sentence of WSRA § 5(d)(1) requires the NRCS and the Corps to evaluate the benefits of designating the North Fork as part of the System as an alternative to building the Project. The Conservancy points out that the National Park Service, a unit of the Department of the Interior, has listed the North Fork on the NRI. According to the Conservancy, the North Fork's listing on the NRI constitutes a determination by the Secretary of the Interior, pursuant to the second sentence of WSRA § 5(d)(1), that the NRCS and the Corps must evaluate the benefits of designating the North Fork as part of the System as an alternative to building the Project. The argument raised by the Conservancy assumes that the second sentence of WSRA § 5(d)(1) delegates to the Secretary of the Interior and the Secretary of Agriculture the authority to designate rivers that federal agencies must evaluate for potential designation as part of the System.

The question whether the second sentence of WSRA § 5(d)(1) delegates to the Secretary of the Interior and the Secretary of Agriculture the authority to designate rivers that federal agencies must evaluate for potential designation as part of the System is a difficult one, but

one we need not resolve in this case. This is so because even if the second sentence of WSRA § 5(d)(1) operates as the Conservancy argues, the NRI does not purport to impose any obligations on federal agencies. Indeed, examination of the NRI compels the conclusion that the NRI does not impose any obligation on the NRCS and the Corps to evaluate the benefits of designating the North Fork as part of the System. Nowhere does the NRI state that federal agencies must evaluate the benefits of designating the listed rivers as part of the System as an alternative to proposed projects on the listed rivers. In fact, the NRI does not purport to impose any particular obligations on federal agencies. It states:

The rivers inventory was conducted by the Department of the Interior with the cooperation of state and local agencies. However, listing of these rivers is in no way an endorsement by the participating agencies that the rivers and river segments are the best within their jurisdiction, nor that they feel any specific action should be taken to protect these rivers.

(J.A. 587). Thus, we conclude that the NRI does not require the NRCS and the Corps to evaluate the benefits of designating the North Fork as part of the System as an alternative to building the Project.

Congress' recognition, in WSRA § 5(d)(2), of the NRI as "a specific study for possible additions" to the System does not change this conclusion. Nothing in this language indicates that the NRI designates rivers that must be evaluated in planning reports by federal agencies. The purpose of WSRA § 5(d)(2) clearly was not to give the NRI any particular status that might trigger the duty imposed by the second sentence of WSRA § 5(d)(1), but simply to authorize the completion of the study of the Upper Klamath River, a river unrelated to this case.

V.

In conclusion, we hold that the Corps violated NEPA by failing to take a hard look at the problem of zebra mussel infestation and that both the NRCS and the Corps violated NEPA by relying on an inflated estimate of the Project's recreation benefits. We therefore vacate those parts of the district court's judgment that held that the

NRCS and the Corps did not violate NEPA in these respects. On remand, the district court shall direct the NRCS and the Corps to reevaluate the Project in light of our holdings herein. In all other respects, the judgment of the district court is affirmed. Pending the NRCS's and the Corps's reevaluation of the Project in compliance with NEPA, further construction of the Project is stayed.

AFFIRMED IN PART, VACATED IN PART, AND REMANDED FOR FURTHER PROCEEDINGS

HALL, Circuit Judge, dissenting:

I must respectfully dissent. I believe that the federal agencies have adequately considered all environmental consequences of the proposed dam, and I would permit the project to go forward without further ado.

We may order an agency to supplement an EIS only if the agency's decision to forgo the supplement in the face of "new" information was "arbitrary and capricious." 5 U.S.C. § 706(2)(A); Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 375-376 (1989). It seems to me that the objections concerning potential zebra mussel infestation were not so much "new" information as "late" information. Surely one of the purposes of a regulation permitting one federal agency to adopt another agency's completed EIS is to make environmental review "one-stop shopping" as near as can practicably be. The prophets of zebra mussel infestation have no excuse for failing to voice their concerns to the NRCS during its preparation of the EIS. Accordingly, I would hold that the Corps' decision was not "arbitrary and capricious."

It follows that I do not fault the Corps for not undertaking an exhaustive NEPA-style investigation of the zebra mussel issue. The Corps took a good enough look to satisfy itself that the dam should be built. It reasoned that zebra mussels are so pervasive, and infestations so inevitable, that it made no sense to let them scuttle a much-needed local improvement. This kind of balancing is the sole province of the executive branch, and we have no role beyond ensuring that the balancing was done. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989). I am satisfied that it was done here.

Likewise, while the economic study relied on by the NRCS was imperfect, perfection is not the standard of review. The EIS makes clear that, because only the proposed multi-purpose dam would meet all of the sponsors' goals, there are only two alternatives: build or not build. Even if one were to indulge the elaborate assumption that all of the recreational gains from the project would be offset by recreational losses, the NRCS would still have had a positive cost-benefit ratio before it.

In this regard, I very much agree with the district court's observation that sound decisionmaking is not strictly cost-driven. For example, the Superintendent of Schools of Ritchie County attributed a \$40,000 "cost" to each day of instruction lost to the river's caprices. This figure is, and must be, purely subjective. What is day of education worth? Can a child's mastery of the Pythagorean Theorem or appreciation of Mozart be expressed in dollars and cents?

Lastly, on this record, and as the majority concedes, the Wild and Scenic Rivers Act does not prohibit construction of the dam.

The decisions of the Corps and NRCS were not arbitrary and capricious. I dissent.

